

UHD Heavy Duty Disconnect Enclosures - NEMA 12

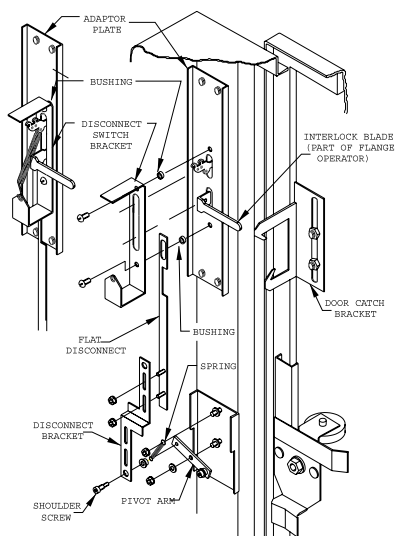
ABB Controls, Allen Bradley, Cutler Hammer, General Electric, Siemens I-T-E Max-Flex™, Square D

Disconnect

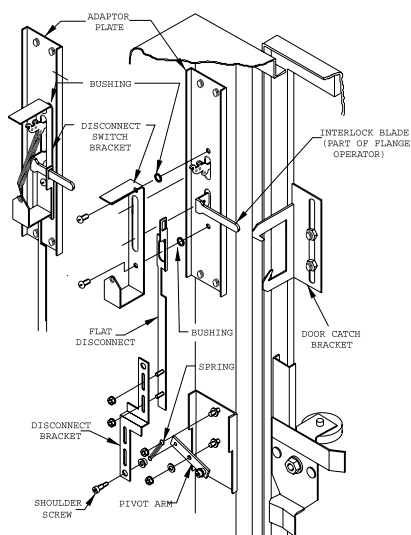
Operator Adaptor Kits

- All Universal series enclosures require one adaptor kit (ordered separately) to adapt the type of disconnect and mechanism to be used.
- Each brand and type requires a different adaptor kit.
- Each kit contains an adaptor plate and master door interlocking mechanism.
- Fully detailed, illustrated instructions included.

Version Shown
Allen Bradley - 1494V H1

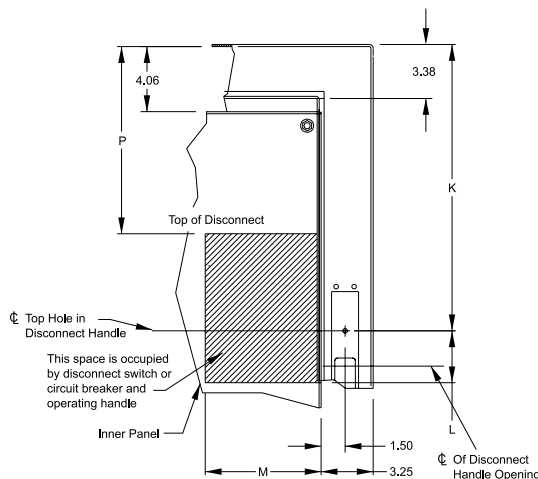


Version Shown
Allen Bradley - 1494V H2



Part No.	Operator Make	Type
AKU	ABB Controls operating handle	
	Disconnect Switch	DSFHN-HS12
	Circuit Breaker	K7FHD-HS12
	Allen Bradley variable depth operating handle	
	Disconnect Switch	
	30-200	1494V H1
	400-600	1494V H2
	Circuit breaker	1494V H11
	Cutler Hammer operating handle	
	Disconnect Switch	C361H1 or H3
Circuit Breaker		
• 150A	C371H1 or H3	
• 50 to 1200A	C371H5 or H7	
Circuit Breaker C371 Flex-Shaft™ handle mechanism.		
General Electric operating handle		
Disconnect Switch	STDA1or STDA2	
Circuit Breaker	STDA1or STDA2	
Circuit Breaker Spectra-Flex™ cable operators		
• 150 to 600A	STDA1	
• K1200	STDA3	
Siemens I-T-E Max-Flex™ operating handle		
Disconnect Switch variable depth	FHOHS	
Circuit Breaker		
• 125 to 600	FHOH	
• 800 to 2000	FHOHN	
Square D class 9422 operating mechanism		
Disconnect Switch variable depth	9422 type A1	
Circuit Breaker variable depth	9422 type A1	
Disconnect Switch with cable mechanism	9422 type A1	
Circuit Breaker with cable mechanism	9422 type A1	
AK1494FD	Allen Bradley	1494F and D
BPAK	Blank Adapter Plate	

Freestanding Enclosures



Space Occupied by Disconnects

Note: Disconnects will occupy space on panel shown by dimensions "K", "L", and "M". Wiring space "P" is available when disconnect is installed in the enclosure.*The disconnect information and space occupied tables based on data supplied by disconnect manufacturer's bulletins. Hammond Manufacturing not responsible for dimensional accuracy.

UHD Heavy Duty Disconnect Enclosures - NEMA 12

ABB Controls, Allen Bradley, Cutler Hammer, General Electric, Siemens I-T-E Max-Flex™, Square D

Disconnect Ordering Information

ABB Controls

Disconnect switch:

- Flange operated switch (fusible or non-fusible)
- Shaft:
 - 18.13" deep enclosures use DSFHS-17
 - 20.13" deep enclosures use DSFHS-22
 - 24.13" deep enclosures, platform must be used with shaft (not included)
- Hhandle: DSFHN-HS12

Circuit breaker:

- Circuit breaker: ABB
- Operating mechanism
- Shaft
 - 18.13" deep enclosures use K7FHD-S17
 - 20.13" deep enclosures use K7FHD-S22
 - 24.13" deep enclosures, platform must be used with shaft (not included)
- Handle mechanism: K7FHD-HS12

Allen Bradley

Bulletin 1494F flange mounted disconnect switch:

- Disconnect switch
- Fuse block adaptor (if required)
- Line and load connectors (if required)

1494D flange mounted circuit breaker operating mechanism:

- Circuit breaker: C-H Westinghouse
- Flange mounted operating mechanism
- Slide mechanism

Bulletin 1494V flange mounted disconnect switch:

- Disconnect switch
- Operating handle
- Connecting rod/rods (long)
- Trailer fuse block kit (if required)
- Fuse clip kit (if required)
- Line and load connectors (if required)

Bulletin 1494V flange mounted circuit breaker operating mechanism:

- Circuit breaker: C-H Westinghouse
- Operating mechanism
- Operating handle
- Connecting rod (long)

C-H Westinghouse

Type C361 disconnect switch, order:

- Disconnect switch with an operating mechanism
- Operating handle: C361H1 or C361H3
- In 24.13" deep enclosures, platform must be used with shaft (not included)

Type C371 circuit breaker operating mechanism with a C-H Westinghouse circuit breaker:

- Circuit breaker
- Operating mechanism
- Long operating rod (if required)
- Operating handle:
 - 150A - C371H1 or C371H3;
 - 250 through 1200A - C371H5 or C371H7

Flex-Shaft™ handle mechanism:

- Circuit breaker
- Complete Flex-Shaft™ handle mechanism

General Electric

Disconnect switch:

- Disconnect switch: Type QMR or QMW
- Fuse clip kit or no-fuse kit
- Flange handle: STDA1 or STDA2
- Variable depth operating mechanism
- Extended length drive rod (if required)

Circuit breaker:

- Circuit breaker
- Flange handle: STDA1 or STDA2
- Variable depth operating mechanism
- Extended length drive rod (if required)

Circuit breaker with a Spectra-Flex™ cable operator:

- Circuit breaker
- Blange mounted handle mechanism:
 - 150 to 600 amps - STDA1
 - SK1200 - STDA3
- Breaker mounted mechanism
- Operating cable

I-T-E Siemens

Disconnect switch:

- Basic switch (right-hand)
- Fuse or no-fuse kit
- Flange mounted handle: FHOHS
- Switch operator
- Operating cable: FHOEC048

Circuit breaker:

- Circuit breaker
- Pressure wire connectors
- Flange mounted handle:
 - 100 to 600 - FHOH
 - 800 to 2000 - FHOHN
- Circuit breaker operator mechanism
- Operating cable:
 - 18.13" deep or 24.13" deep enclosures accept 36" or 48" cables;
 - 24.13" deep enclosures require a 48" cable
- These items are available from I-T-E as a complete mechanism with a 36" operating cable only Order items separately when using a 48" cable

Square D

Disconnect switch:

- Disconnect switch with operating mechanism
- Universal handle mechanism: Type A-1
- Long operating rod (if required)

Circuit breaker:

- Circuit breaker
- Operating mechanism
- Universal handle mechanism: Type A-1
- Long operating rod (if required)

When using a Class 9422 Type T disconnect switch with a cable mechanism, order:

- Disconnect switch with operating mechanism: Class 9422, Type T
- Handle mechanism: Class 9422, Type A-1
- Cable mechanism: Class 9422 CFT_O, 3, 5, or 10 foot

Circuit breaker with a cable mechanism:

- Circuit breaker: Square D
- Handle mechanism: Class 9422, type A-1
- Cable mechanism: Class 9422 CFT_O, 3, 5, or 10 foot

UHD Heavy Duty Disconnect Enclosures - NEMA 12

ABB Controls, Allen Bradley, Cutler Hammer, General Electric, Siemens I-T-E Max-Flex™, Square D

Disconnect

ABB Controls

ABB Controls Disconnect Switches (Flange-Mounted Operators)

Fits Enclosure Height			ABB Switch Number	Amp Rating	Fuse Clip	Fuse Class	Space Occupied		When A=72.13	When A=84.13	When A=90.13
72.13	84.13	90.13					L	M	P	P	P
•	•	•	OETL-NF30-F	30A	No Fuse	—	4.78	7.72	11.80	17.80	20.80
•	•	•	OETL-NF60-F	60A	No Fuse	—	4.78	7.40	11.80	17.80	20.80
•	•	•	OETL-NF100-F	100A	No Fuse	—	5.22	8.78	11.37	17.37	20.37
•	•	•	OETL-NF175-F	175A	No Fuse	—	5.07	7.68	10.48	16.48	19.48
•	•	•	OETL-NF200-F	200A	No Fuse	—	5.07	8.47	10.48	16.48	19.48
•	•	•	OESA-F30J6-F	30A	30A-600V	J	4.78	7.72	11.80	17.80	20.80
•	•	•	OESA-F60J6-F	60A	60A-600V	J	4.78	7.40	11.80	17.80	20.80
•	•	•	OESA-F100J6-F	100A	100A-600V	J ¹	5.22	8.78	11.37	17.37	20.37
				200A ²							

¹J type fuse clips are standard. If 600 V Type "T" fuse clips are desired, order T type fuse adaptor

²200 A available by using non-fusible 200A switch and a trailing fuse block (consult ABB)

Freestanding Enclosures

ABB Controls Circuit Breakers (Flange-Mounted Operators)

Fits Enclosure Height			ISOMAX Circuit Breaker	Amp Rating	Operating Mechanism	Frame Type	Space Occupied		When A=72.13	When A=84.13	When A=90.13
72.13	84.13	90.13					L	M	P	P	P
•	•	•	S1N100TL	100A	K2FHD-M	S1	5.30	4.57	12.33	18.33	21.33
•	•	•	S3N150TW	150A	K3FHD-M	S3	6.67	4.99	11.73	17.73	20.73
•	•	•	S3N225TW	225A	K3FHD-M	S3	6.67	4.99	11.73	17.73	20.73
•	•	•	S4N250BW	250A	K4FHD-M	S4	8.45	4.99	10.20	16.20	19.20
•	•	•	S5N400TW	400A	K5FHD-M	S5	8.45	6.37	10.20	16.20	19.20
•	•	•	S6N600TW	600A	K6FHD-M	S6	8.33	9.97	9.53	15.53	18.53
•	•	•	S6N800TW	800A	K6FHD-M	S6	8.33	9.97	9.53	15.53	18.53

"K" = 11.88 when "A" = 72.13

"K" = 17.88 when "A" = 84.13

"K" = 20.88 when "A" = 90.13

Charts reference Space Occupied by Disconnect Drawing.

UHD Heavy Duty Disconnect Enclosures - NEMA 12

ABB Controls, Allen Bradley, Cutler Hammer, General Electric, Siemens I-T-E Max-Flex™, Square D

Disconnect

Freestanding Enclosures

Allen Bradley

Allen Bradley 1494F Disconnect Switches

Fits Enclosure Height			Allen Bradley Type Number	Amp Rating	Fuse Clip	Fuse Class	Space Occupied		When A=72.13	When A=84.13	When A=90.13
72.13	84.13	90.13					L	M ¹	P	P	P
•	•	•	N30	30A	No Fuse	—	4.62	6.50	9.31	15.31	18.31
•	•	•	NF30	30A	30A-250V	H, K, R	6.50	6.50	9.31	15.31	18.31
•	•	•	NF30	30A	60A-250V	H, K, R	7.25	6.50	9.31	15.31	18.31
•	•	•	NF30	30A	30A-600V	H, K, R	9.25	6.50	9.31	15.31	18.31
•	•	•	NF30	30A	60A-600V	H, K, R	9.75	6.50	9.31	15.31	18.31
•	•	•	NF30	30A	30A-600V	J	6.50	6.50	9.31	15.31	18.31
•	•	•	NF30	30A	60A-600V	J	6.62	6.50	9.31	15.31	18.31
•	•	•	N60	60A	No Fuse	—	4.62	6.50	8.62	14.62	17.62
•	•	•	NF60	60A	30A-600V	H, K, R	10.38	6.50	8.62	14.62	17.62
•	•	•	NF60	60A	60A-250V	H, K, R	8.38	6.50	8.62	14.62	17.62
•	•	•	NF60	60A	100A-250V	H, K, R	10.88	6.50	8.62	14.62	17.62
•	•	•	NF60	60A	60A-600V	H, K, R	10.88	6.50	8.62	14.62	17.62
•	•	•	NF60	60A	100A-600V	H, K, R	12.88	6.62	8.62	14.62	17.62
•	•	•	NF60	60A	60A-600V	J	7.75	6.50	8.62	14.62	17.62
•	•	•	NF60	60A	100A-600V	J	9.75	6.50	8.62	14.62	17.62
•	•	•	N100	100A	No Fuse	—	4.62	7.25	6.75	12.75	15.75
•	•	•	NF100	100A	100A-250V	H, K, R	11.38	7.38	6.75	12.75	15.75
•	•	•	NF100	100A	200A-250V	H, K, R	12.25	7.62	6.75	12.75	15.75
•	•	•	NF100	100A	100A-600V	H, K, R	13.38	7.50	6.75	12.75	15.75
•	•	•	NF100	100A	200A-600V	H, K, R	14.75	7.75	6.75	12.75	15.75
•	•	•	NF100	100A	100A-600V	J	10.12	7.38	6.75	12.75	15.75
•	•	•	NF100	100A	200A-600V	J	10.88	7.50	6.75	12.75	15.75
•	•	•	N200	200A	No Fuse	—	7.12	10.38	5.12	11.12	14.12
•	•	•	NF200	200A	200A-250V	H, K, R	15.00	10.38	5.12	11.12	14.12
•	•	•	NF200	200A	400A-250V	H, K, R	16.56	10.75	5.12	11.12	14.12
•	•	•	NF200	200A	200A-600V	H, K, R	17.56	10.38	5.12	11.12	14.12
•	•	•	NF200	200A	400A-600V	H, K, R	19.56	11.00	5.12	11.12	14.12
•	•	•	NF200	200A	200A-600V	J	13.69	10.38	5.12	11.12	14.12
•	•	•	NF200	200A	400A-600V	J	15.00	10.62	5.12	11.12	14.12

¹"M" dimension does not allow for auxiliary switches. Refer to Allen Bradley instructions if additional space is required. Allen Bradley 1494D Operators (Circuit Breakers)

Allen Bradley 1494D Operators (Circuit Breakers)

Fits Enclosure Height			Allen Bradley Type Number	Amp Rating	Circuit Breaker Type	Space Occupied		When A=72.13	When A=84.13	When A=90.13
72.13	84.13	90.13				L	M ¹	P	P	P
•	•	•	N4/N40	150A	C-H Westinghouse EHD, FD, FDB, FDC, HFD, HMCP	5.81	4.56	9.25	15.25	18.25
•	•	•	N5/N50	250A	C-H Westinghouse JD, JDB, JDC, HJD, HMCP	8.81	4.75	8.44	14.44	17.44
•	•	•	N5/N60	400A	C-H Westinghouse KD, KDB, DK, HKD, HMCP	8.81	5.88	8.50	14.50	17.50

¹"M" dimension does not allow for auxiliary switches. Refer to Allen Bradley instructions if additional space is required.

"K" = 9.88 when "A" = 72.13 (except 200A switch) "K" = 8.56 when "A" = 72.13 (200A switch)

"K" = 15.88 when "A" = 84.13 (except 200A switch) "K" = 14.56 when "A" = 84.13 (200A switch)

"K" = 18.88 when "A" = 90.13 (except 200A switch) "K" = 17.56 when "A" = 90.13 (200A switch)

Charts reference Space Occupied by Disconnect Drawing.

...Allen Bradley continued on next page

UHD Heavy Duty Disconnect Enclosures - NEMA 12

ABB Controls, Allen Bradley, Cutler Hammer, General Electric, Siemens I-T-E Max-Flex™, Square D

Disconnect

Allen Bradley cont'd.

Allen Bradley 1494V Disconnect Switches

Fits Enclosure Height			ABB Switch Number	Amp Rating	Fuse Clip	Fuse Class	Space Occupied		When	When	When
72.13	84.13	90.13					L	M ¹	A=72.13 P	A=84.13 P	A=90.13 P
•	•	•	DS30	30A	No Fuse	—	3.88	6.75	10.00	16.00	19.00
•	•	•	DS30	30A	30A-250V	H,K,R	5.25	6.75	10.00	16.00	19.00
•	•	•	DS30	30A	30A-600V	H,K,R	8.00	6.75	10.00	16.00	19.00
•	•	•	DS30	30A	30A-600V	J	5.25	6.75	10.00	16.00	19.00
•	•	•	DS30	30A	60A-250V	H,K	6.00	6.75	10.00	16.00	19.00
•	•	•	DS30	30A	60A-600V	H,K	8.50	6.75	10.00	16.00	19.00
•	•	•	DS30	30A	60A-600V	J	5.38	6.75	10.00	16.00	19.00
•	•	•	DS60	60A	No Fuse	—	3.88	6.75	9.81	15.81	18.81
•	•	•	DS60	60A	60A-250V	H,K,R	6.00	6.75	9.81	15.81	18.81
•	•	•	DS60	60A	60A-600V	H,K,R	8.50	6.75	9.81	15.81	18.81
•	•	•	DS60	60A	60A-600V	J	5.38	6.75	9.81	15.81	18.81
•	•	•	DS60	60A	30A-600V	H,K,R	8.00	6.75	9.81	15.81	18.81
•	•	•	DS60	60A	100A-250V	H,K	8.50	6.75	9.81	15.81	18.81
•	•	•	DS60	60A	100A-600V	H,K	10.50	6.75	9.81	15.81	18.81
•	•	•	DS60	60A	100A-600V	J	7.25	6.75	9.81	15.81	18.81
•	•	•	DS100 ²	100A	No Fuse	—	3.88	6.75	9.81	15.81	18.81
•	•	•	DS100 ²	100A	100A-250V	H,K,R	8.12	6.75	9.81	15.81	18.81
•	•	•	DS100 ²	100A	100A-600V	H,K,R	10.12	6.75	9.81	15.81	18.81
•	•	•	DS100 ²	100A	100A-600V	J	6.80	6.75	9.81	15.81	18.81
•	•	•	DS100 ²	100A	60A-600V	H,K,R	10.12	6.75	9.81	15.81	18.81
•	•	•	DS100 ²	100A	60A-600V	J	8.88	6.75	9.81	15.81	18.81
•	•	•	DS200 ²	200A	No Fuse	—	4.75	8.00	8.34	14.34	17.34
•	•	•	DS200 ²	200A	200A-250V	H,K,R	10.88	8.00	8.34	14.34	17.34
•	•	•	DS200 ²	200A	200A-600V	H,K,R	13.88	8.00	8.34	14.34	17.34
•	•	•	DS200 ²	200A	200A-600V	J	9.50	8.00	8.34	14.34	17.34
•	•	•	DS200 ²	200A	100A-600V	H,K,R	12.00	8.00	8.34	14.34	17.34
•	•	•	DS200 ²	200A	100A-600V	J	8.75	8.00	8.34	14.34	17.34
•	•	•	DS400	400A	No Fuse	—	10.75	11.00		10.14	13.14
•	•	•	DS400	400A	400A-250V	H,K,R	16.12	11.00		10.14	13.14
•	•	•	DS400	400A	400A-600V	H,K,R	19.12	11.00		10.14	13.14
•	•	•	DS400	400A	400A-600V	J	14.62	11.00		10.14	13.14
•	•	•	DS600	600A	No Fuse	—	10.75	11.00			13.14
•	•	•	DS600 ³	600A	600A-250V	H,R	10.75	11.00			13.14
•	•	•	DS600 ³	600A	600A-600V	H,R	10.75	11.00			13.14
•	•	•	DS600	600A	600A-600V	J	17.59	11.00			13.14

¹Series B

²"M" dimension does not allow for auxiliary switches

Allen Bradley 1494V Operators (Circuit Breakers)

Fits Enclosure Height			Alan Bradley Type Number	Amp Rating	Frame Type	Space Occupied		When	When	When
72.13	84.13	90.13				L	M ¹	A=72.13 P	A=84.13 P	A=90.13 P
•	•	•	M40	15A-150A	C-H Westinghouse EHD,FD,FDB,FDC,HFD,HMCP	5.00	4.62	11.25	17.25	20.25
•	•	•	M50	70A-250A	C-H Westinghouse JD,JDB,JDC,HJD,HMCP	9.75	4.88	10.81	16.81	19.81
•	•	•	M60	100A-400A	C-H Westinghouse KD,KDB,DK,HKD,HMCP	9.69	6.25	10.62	16.62	19.62

¹"M" dimension does not allow for auxiliary switches. Refer to Allen Bradley instructions if additional space is required.

"K" = 11.88 when "A" = 72.13

"K" = 17.88 when "A" = 84.13, except 400A or 600A switches

"K" = 20.88 when "A" = 90.13, except 400A or 600A switches

"K" = 16.43 when "A" = 84.13, 400A switches only

"K" = 19.43 when "A" = 90.13, 400A and 600A switches only

Charts reference Space Occupied by Disconnect Drawing.

Freestanding Enclosures

UHD Heavy Duty Disconnect Enclosures - NEMA 12

ABB Controls, Allen Bradley, Cutler Hammer, General Electric, Siemens I-T-E Max-Flex™, Square D

Disconnect

Freestanding Enclosures

Cutler Hammer

Cutler Hammer C361 Disconnect Switches

Fits Enclosure Height			Cutler Hammer Type Number	Amp Rating	Fuse Clip	Fuse Class	Space Occupied		When	When	When
72.13	84.13	90.13					L	M	A=72.13	A=84.13	A=90.13
•	•	•	C361NC	30A	No Fuse	—	5.75	7.55	10.50	16.50	19.50
•	•	•	C361SC21	30A	30A-250V	H, K, R	8.38	7.55	10.50	16.50	19.50
•	•	•	C361SC61	30A	60A-250V	H, K, R	8.38	7.55	10.50	16.50	19.50
•	•	•	C361SC61	30A	30A-600V	H, J, K, R	8.38	7.55	10.50	16.50	19.50
•	•	•	C361ND	60A	No Fuse	—	5.75	7.55	10.50	16.50	19.50
•	•	•	C361SD22	60A	60A-250V	H, K, R	8.38	7.55	10.50	16.50	19.50
•	•	•	C361SD22	60A	30A-600V	J	8.38	7.55	10.50	16.50	19.50
•	•	•	C361SD62	60A	60A-600V	H, K, R	8.38	7.55	10.50	16.50	19.50
•	•	•	C361SD62	60A	60A-600V	J	8.38	7.55	10.50	16.50	19.50
•	•	•	C361NE	100A	No Fuse	—	5.56	9.07	10.06	16.06	19.06
•	•	•	C361SE263	100A	100A-250V	H, K, R	10.31	9.07	10.06	16.06	19.06
•	•	•	C361SE263	100A	100A-600V	H, K, R	10.31	9.07	10.06	16.06	19.06
•	•	•	C361SE263	100A	100A-600V	J	10.31	9.07	10.06	16.06	19.06
•	•	•	C361NF	200A	No Fuse	—	13.06	10.12	8.06	14.12	17.12
•	•	•	C361SF264	200A	200A-250V	H, K, R	13.06	10.12	8.06	14.12	17.12
•	•	•	C361SF264	200A	200A-600V	H, K, R	13.06	10.12	8.06	14.12	17.12

¹"M" dimension does not allow for auxiliary switches. Refer to Cutler Hammer instructions if additional space is required.

"K" = 11.88 when "A" = 72.13

"K" = 17.88 when "A" = 84.13

"K" = 20.88 when "A" = 90.13

Cutler Hammer C371 Circuit Breakers (C-H Westinghouse Circuit Breakers)

Fits Enclosure Height			Cutler Hammer Mechanisms	Amp Rating	Frame Type	Space Occupied		When	When	When	
72.13	84.13	90.13				L	M	A=72.13	A=84.13	A=90.13	
•	•	•	C371E	150A	F Frame EHD,FDB,FD,HFD,FDC	6.00	5.62	11.62	17.62	20.62	
•	•	•	C371E	150A	F Frame HMCP	6.00	5.62	11.62	17.62	20.62	
•	•	•	C371F	250A	J Frame JDB,JD,HJD,JDC	8.94	8.12	11.44	17.44	20.50	
•	•	•	C371F	250A	J Frame HMCP	10.94	8.12	11.44	17.44	20.50	
•	•	•	C371F	400A	K Frame DK,KDB,KD,HKD	9.75	8.12	11.00	17.00	20.00	
•	•	•	C371F	400A	K Frame HMCP	9.75	8.12	11.00	17.00	20.00	
•	•	•	C371G	600A	L Frame LD,HLD,LDC	8.44	12.00	9.38	15.38	18.38	
•	•	•	C371G	600A	L Frame HMCP	8.44	12.00	9.38	15.38	18.38	
•	•	•	C371K	800A	M Frame MD,MDS	10.25	12.00	—	11.81	14.81	
¹	•	•	C371K	1200A	M Frame ND,HND,NDC	10.25	12.00	—	11.81	14.81	

¹ Wire bend space "P" does not allow cable sizes larger than 350 MCM in an 84.13" tall enclosure when 4 cables per terminal used.

Refer to NATIONAL ELECTRIC CODE 2005 table 312-6(b) for details.

Wire bend space "P" is compatible with C-H Westinghouse breakers with TA1201NB1 terminals.

"K" = 11.88 when "A" = 72.13

"K" = 17.88 when "A" = 84.13

"K" = 20.88 when "A" = 90.13

Charts reference Space Occupied by Disconnect Drawing.

...Cutler Hammer continued on next page

UHD Heavy Duty Disconnect Enclosures - NEMA 12

ABB Controls, Allen Bradley, Cutler Hammer, General Electric, Siemens I-T-E Max-Flex™, Square D

Disconnect

Cutler Hammer cont'd.

Cutler Hammer Flex-Shaft™ Operator Mechanisms (C-H Westinghouse Circuit Breakers)

Complete Operator Mechanisms	Amp Rating	Fram Type	Breaker Height "X" (in inches)	Breaker Width "Y" (in inches)
F1S03	150A	F Frame EHD,FDB,FD,HFD	6.00	4.12
F1S03	150A	F Frame HMCP	6.00	4.12
F2S03	250A	J Frame JDB,JD,HJD,JDC	10.00	4.12
F2S03	250A	J Frame HMCP	10.00	4.12
F3S03	400A	K Frame DK,KDB,KD,HKD	10.12	5.50
F3S03	400A	K Frame HMCP	12.45	5.50
F4S04	600A	L Frame LD,HLD,LDC	10.75	8.25
F4S04	600A	L Frame HMCP	12.50	8.25
F7S04	800A	M Frame MD,MDS	16.00	8.25
F5S04	1200A	N Frame ND,HND,NDC	16.00	8.25
F6S04	2500A	R Frame RD,CRD, RDC	16.00	15.50

Part numbers for Complete Operator Mechanisms include flange mounted handle, flexible shaft and circuit breaker mechanism. The last digit of the part number denotes the shaft length (F1S03=3' length).

- F,J,K frame Flex-Shafts™ available in 3' to 10' lengths.
- L,N,R frame Flex-Shafts™ available in 4' to 6' lengths.

Space Occupied By Disconnect

1. Flex-Shaft™ System permits circuit breaker locations separate from flange mounted handle mechanism.
2. See National Electrical Code 2005 article 430-10(b) for wiring space (Ref "P") required for line side conductors.
3. Select shaft length based on location of circuit breaker in the enclosure. Maintain a 4" minimum bending radius for the Flex-Shaft™.
4. Space occupied by circuit breaker is calculated by:
 - Overall (Height "X" and Width "Y")
 - Minimum wire bend space (manufacturer specified)
 - Location "M" from right to left.

Charts reference Space Occupied by Disconnect Drawing.

Freestanding Enclosures

UHD Heavy Duty Disconnect Enclosures - NEMA 12

ABB Controls, Allen Bradley, Cutler Hammer, General Electric, Siemens I-T-E Max-Flex™, Square D

Disconnect

Freestanding Enclosures

General Electric

General Electric Type STDA Disconnect Switch Operators

Fits Enclosure Height			General Electric Switch Mechanisms	Amp Rating	Fuse Clip	Fuse Class	Space Occupied		When	When	When
72.13	84.13	90.13					L	M	A=72.13 P	A=84.13 P	A=90.13 P
•	•	•	TDOM1A	30A	No Fuse	—	6.88	5.38	12.38	18.38	21.38
•	•	•	TDOM1A	30A	30A-250V	H, R	6.88	5.38	12.38	18.38	21.38
•	•	•	TDOM1B	30A	30A-600V	H, R	11.50	5.38	12.38	18.38	21.38
•	•	•	TDOM1B	30A	60A-250V	H, R	11.50	5.38	12.38	18.38	21.38
•	•	•	TDOM1B	30A	60A-600V	H, R	11.50	5.38	12.38	18.38	21.38
•	•	•	TDOM1A	60A	No Fuse	—	6.88	5.38	12.38	18.38	21.38
•	•	•	TDOM1B	60A	60A-250V	H, R	11.50	5.38	12.38	18.38	21.38
•	•	•	TDOM1B	60A	60A-600V	H, R	11.50	5.38	12.38	18.38	21.38
•	•	•	TDOM1B	60A	100A-250V	H, R	11.50	5.38	12.38	18.38	21.38
•	•	•	TDOM1B	60A	100A-600V	H, R	11.50	5.38	12.38	18.38	21.38
•	•	•	TDOM1A	100A	No Fuse	—	6.88	5.38	12.38	18.38	21.38
•	•	•	TDOM1B	100A	100A-250V	H, R	11.50	5.38	12.38	18.38	21.38
•	•	•	TDOM1B	100A	100A-600V	H, R	11.50	5.38	12.38	18.38	21.38
•	•	•	TDOM1B	100A	200A-250V	H, R	11.50	5.38	12.38	18.38	21.38
•	•	•	TDOM1B	100A	200A-600V	H, R	11.50	5.38	12.38	18.38	21.38
•	•	•	TDOM2	200A	No Fuse	—	7.00	9.25	9.69	15.69	18.69
•	•	•	TDOM2	200A	200A-250V	H, R	15.38	9.25	9.69	15.69	18.69
•	•	•	TDOM2	200A	200A-600V	H, R	15.38	9.25	9.69	15.69	18.69

General Electric Type STDA Circuit Breaker Operators

Fits Enclosure Height			General Electric Circuit Breaker Mechanisms	Amp Rating	Frame Type	Space Occupied		When	When	When
72.13	84.13	90.13				L	M	A=72.13 P	A=84.13 P	A=90.13 P
•	•	•	SDOM1A	150A	TEB, TED, THED	6.88	5.38	11.24	17.24	20.24
•	•	•	SDOM1A	150A	TEC	6.88	5.38	11.24	17.24	20.24
•	•	•	TDOM1B	150A	TB1	11.50	5.38	11.24	17.24	20.24
•	•	•	TDOM1B	150A	TEC, TECL	11.50	5.38	11.24	17.24	20.24
•	•	•	TDOM1C	150A	TEL	6.88	5.38	11.24	17.24	20.24
•	•	•	TDOM1D	150A	THLC1	6.88	5.38	9.87	15.87	18.87
•	•	•	TDOM3	225A	TFJ	10.38	5.88	10.81	16.81	19.81
•	•	•	TDOM3	225A	TFK, THFK, TFL	10.38	5.88	10.81	16.81	19.81
•	•	•	TDOM4	400A	TJJ, TJK4, THJK4, TJL4V	8.25	9.50	9.91	15.91	18.91
•	•	•	TDOM4	600A	TJK6, THJK6, TJ4V, TJL4V	8.25	9.50	9.91	15.91	18.91
•	•	•	TDOM5	400A	TB4, TJH6S	14.25	9.50	9.91	15.91	18.91
•	•	•	TDOM6	225A	TLB2, THLC2	11.75	9.50	—	15.35	18.35
•	•	•	TDOM6	400A	TLB4, THLC4	11.75	9.50	—	13.97	16.97
•	•	•	TDOM6	800/1200A	TKMA, THKMA, TK4V	11.75	9.50	—	—	18.38
•	•	•	TDOM6	1200A	TK4BV, THK4V	11.75	9.50	—	—	18.38
•	•	•	TDOM7	600A	TB6	18.12	9.50	—	12.25	15.25
•	•	•	TDOM7	800A	TB8	18.12	9.50	—	12.25	15.25
•	•	•	TDOM7	1200A	TKL12S	18.12	9.50	—	—	15.25
•	•	•	SDOM1A	150A	SE150	6.88	5.38	11.24	17.24	20.24
•	•	•	SDOM3	250A	SPECTRA SF250	10.38	5.88	10.81	16.81	19.81
•	•	•	SDOM4	600A	SPECTRA SG600	10.00	7.12	—	13.18	16.18

"K" = 11.88 when "A" = 72.13
 "K" = 17.88 when "A" = 84.13
 "K" = 20.88 when "A" = 90.13

Charts reference Space Occupied by Disconnect Drawing.

...General Electric continued on next page

Technical references and DXF downloads available at www.hamfmg.com

All dimensions in inches unless specified otherwise

UHD Heavy Duty Disconnect Enclosures - NEMA 12

ABB Controls, Allen Bradley, Cutler Hammer, General Electric, Siemens I-T-E Max-Flex™, Square D

Disconnect

General Electric cont'd.

General Electric Circuit Breakers (Spectra-Flex™ Cable Operators)

Fits Enclosure Height			Max Frame Size	Amp Rating	Circuit Breaker Height "X"	Circuit Breaker Width "Y"
72.13	84.13	90.13				
•	•	•	E150	150A	6.31	4.12
•	•	•	SE150	150A	6.31	4.12
•	•	•	SF250	250A	10.12	4.12
•	•	•	SG600	600A	10.09	5.50
•	•	•	SK1200	1200A	15.50	8.25

Note: All UHD & UHDM SERIES enclosures that are 24.13" deep require a 48" or longer operating cable

Frame Size	Breaker Mechanism	Flange Mounting Handle ¹	Operating Cable ²
E150	SCOM1A	SCH1	SC3L
SE150/SF250	SCOM1EF	SCH1	SC3L
SG600	SCOM1G	SCH1	SC3L
SK1200	SCOM1K	SCH2k	SC3H

¹ Operating Cables are available 3' to 10' lengths.

² In the table above, the number "3" in the part number indicates a 3' cable.

Space Occupied By Disconnect

- GE Spectra-Flex™ Operating Cables permit circuit breaker locations separate from flange mounted handle mechanism.
- See National Electrical Code 2005 article 430-10(b) for wiring space (Ref "P") required for line side conductors.
- Select shaft length based on location of circuit breaker in the enclosure. Maintain a 3" minimum bending radius for the Flex-Shaft™.
- Space occupied by circuit breaker is calculated by:
 - Overall (Height "X" and Width "Y")
 - Minimum wire bend space (manufacturer specified)
 - Location "M" from right to left.

"K" = 11.88 when "A" = 72.13

"K" = 17.88 when "A" = 84.13

"K" = 20.88 when "A" = 90.13

Charts reference Space Occupied by Disconnect Drawing.

Freestanding Enclosures

UHD Heavy Duty Disconnect Enclosures - NEMA 12

ABB Controls, Allen Bradley, Cutler Hammer, General Electric, Siemens I-T-E Max-Flex™, Square D

Disconnect

Freestanding Enclosures

Siemens I-T-E

Siemens I-T-E Disconnect Switches (Max-Flex™ Operators)

Fits Enclosure Height			ITE Switch Type	Amp Rating	Fuse Clip	Fuse Class	Disconnect Height "X"	Disconnect Width "Y"
72.13	84.13	90.13						
•	•	•	MCS603R	30A	No Fuse	—	5.52	6.13
•	•	•	MCS603R	30A	30A-250V	H,K,R	8.11	6.13
•	•	•	MCS603R	30A	30A-600V	H,K,R	10.11	6.13
•	•	•	MCS603R	30A	30A-600V	J	8.48	6.13
•	•	•	MCS606R	60A	No Fuse	—	5.52	6.13
•	•	•	MCS606R	60A	60A-250V	H,K,R	7.86	6.13
•	•	•	MCS606R	60A	60A-600V	H,K,R	10.38	6.13
•	•	•	MCS606R	60A	60A-600V	J	8.36	6.13
•	•	•	MCS610R	100A	No Fuse	—	7.59	7.38
•	•	•	MCS610R	100A	100A-250V	H,K,R	11.85	7.38
•	•	•	MCS610R	100A	100A-600V	H,K,R	13.85	7.38
•	•	•	MCS610R	100A	100A-600V	J	10.60	7.38
•	•	•	MCS620R	200A	No Fuse	—	9.00	9.17
•	•	•	MCS620R	200A	200A-250V	H,K,R	14.70	9.17
•	•	•	MCS620R	200A	200A-600V	H,K,R	17.20	9.17
•	•	•	MCS620R	200A	200A-600V	J	13.32	9.17

Note: Enclosures that are 24.13" deep require a 48" Max-Flex™ cable (minimum cable length).

Siemens I-T-E Max-Flex™ Operators (Circuit Breakers)

Complete Operator Mechanism	Amp Rating	Breaker Frame Size	Circuit Breaker Type	Circuit Breaker Height "X"	Circuit Breaker Width "Y"
FHOE036	125A	ED	ED2, ED4, ED6, HED4, HED6	6.34	3.00
FHOE036	125A	CED	CED6	9.58	3.00
FHOF036	250A	FD	FXD6-A, FD6-A, HFD6, FXD6-ETJ, HHFD6, HHFXD6	9.50	4.50
FHOF036	250A	CFD	CFD6, CFD6-ETI	14.25	4.50
FHOJ036	400A, 600A	JD, LD	JXD2, LXD6, JD6, LD6, HJD6, HLD6, HHJD6, HHLXD6, HHJXD6, HHLXD6, JXD6-ETI, LXD6-ETI	11.00	7.50
FHOJ036	400A, 600A	CJD,CLD	CJD6, CLD6, CJD6-ETI, CLD6-ETI	17.86	7.50
FHOLMO36	800A	LMD	LMD6, LMXD6, HLMXD6, HLMXD6-ETI	16.00	9.00
FHONO48	800A, 1200A	MD, ND	MD6, ND6, MXD6, NXD6,HMD6, HND6, HMXD6, HNXD6, CMD6, CND6, MXD6-ETI, CMD6-ETI	24.00	9.00
FHONO48	1600A, 2000A	PD,RD	PD6, RD6, PXD6, RXD6, HPD6, HPXD6, HRXD6, CPD6	24.50 ²	13.63 ²

Circuit Breaker Size includes required base mounting block.

Last three digits of operator mechanism part number denote cable length in inches.

24" deep enclosures require longer operating cables. Sold separately.

"K" = 11.88 when "A" = 72.13

"K" = 17.88 when "A" = 84.13

"K" = 20.88 when "A" = 90.13

(Deduct 1.45 inches from "K" for FHONO48 Operator mechanism for MD,ND,PD,RD Circuit Breakers)

Space Occupied By Disconnect

- I-T-E Max-Flex™ System permits circuit breaker locations separate from flange mounted handle mechanism.
- See National Electrical Code 2005 article 430-10(b) for wiring space (Ref "P") required for line side conductors.
- See Siemens I-T-E instructions for disconnect location limitations when using 36" or 48" Max-Flex™ cables.
- Space occupied by circuit breaker is calculated by:
 - Overall (Height "X" and Width "Y")
 - Minimum wire bend space (manufacturer specified)
 - Location "M" from right to left.

Charts reference Space Occupied by Disconnect Drawing.

Technical references and DXF downloads available at www.hamfmg.com

All dimensions in inches unless specified otherwise

Quality Enclosures. Service Excellence.

UHD Heavy Duty Disconnect Enclosures - NEMA 12

ABB Controls, Allen Bradley, Cutler Hammer, General Electric, Siemens I-T-E Max-Flex™, Square D

Disconnect

Square D

Square D Class 9422 Variable Depth Disconnect Switches

Fits Enclosure Height			Square D Type Number	Amp Rating	Fuse Clip	Fuse Class	Space Occupied		When A=72.13	When A=84.13	When A=90.13
72.13	84.13	90.13					L	M	P	P	P
•	•	•	TCN-30	30A	No Fuse	—	3.80	6.97	10.75	16.75	19.75
•	•	•	TCF-30	30A	30A-250V	H, K, R	5.53	6.97	10.75	16.75	19.75
•	•	•	TCF-33	30A	30A-600V	H, K, R	8.15	6.97	10.75	16.75	19.75
•	•	•	TCF-33	30A	60A-250V	H, K, R	6.15	6.97	10.75	16.75	19.75
•	•	•	TCF-33	30A	30A-600V	J	5.53	6.97	10.75	16.75	19.75
•	•	•	TDN-60	60A	No Fuse	—	3.80	6.97	10.75	16.75	19.75
•	•	•	TDF-60	60A	30A-600V	H, K, R	8.15	6.97	10.75	16.75	19.75
•	•	•	TDF-60	60A	60A-250V	H, K, R	6.15	6.97	10.75	16.75	19.75
•	•	•	TDF-63	60A	60A-600V	H, K, R	8.65	6.97	10.75	16.75	19.75
•	•	•	TDF-63	60A	60A-600V	J	5.53	6.97	10.75	16.75	19.75
•	•	•	TEN-10	100A	No Fuse	—	3.80	6.97	10.62	16.62	19.62
•	•	•	TEF-10	100A	100A-250V	H, K, R	8.25	6.97	10.62	16.62	19.62
•	•	•	TEF-10	100A	100A-600V	H, K, R	10.25	6.97	10.62	16.62	19.62
•	•	•	TEF-10	100A	100A-600V	J	7.05	6.97	10.62	16.62	19.62
•	•	•	TEF-13	100A	200A-600V	J	—	—	10.62	16.62	19.62
•	•	•	TC-1	30A	No Fuse	—	5.75	6.12	9.88	15.88	18.88
•	•	•	TC-2	30A	30A-250V	H, K, R	5.75	6.12	9.88	15.88	18.88
•	•	•	TC-3	30A	30A-600V	H, K, R	7.75	6.12	9.88	15.88	18.88
•	•	•	TC-3	30A	60A-250V	H, K, R	5.88	6.12	9.88	15.88	18.88
•	•	•	TC-3	30A	30A-600V	J	5.75	6.12	9.88	15.88	18.88
•	•	•	TD-1	60A	No Fuse	—	6.38	6.75	10.75	16.75	19.75
•	•	•	TD-2	60A	30A-600V	H, K, R	8.50	6.75	10.75	16.75	19.75
•	•	•	TD-2	60A	60A-250V	H, K, R	6.50	6.75	10.75	16.75	19.75
•	•	•	TD-3	60A	60A-600V	H, K, R	9.00	6.75	10.75	16.75	19.75
•	•	•	TD-3	60A	60A-600V	J	6.38	6.75	10.75	16.75	19.75
•	•	•	TE-1	100A	No Fuse	—	4.75	8.50	10.50	16.50	19.50
•	•	•	TE-2	100A	100A-250V	H, K, R	7.50	8.50	10.50	16.50	19.50
•	•	•	TE-2	100A	100A-600V	H, K, R	9.50	8.50	10.50	16.50	19.50
•	•	•	TE-2	100A	100A-600V	J	6.25	8.50	10.50	16.50	19.50
•	•	•	TE-3	100A	200A-600V	J	13.75	8.50	10.50	16.50	19.50
•	•	•	TF-1	200A	No Fuse	—	5.50	11.75	9.12	15.12	18.12
•	•	•	TF-2	200A	200A-250V	H, K, R	11.50	11.75	9.12	15.12	18.12
•	•	•	TF-2	200A	200A-600V	H, K, R	14.00	11.75	9.12	15.12	18.12
•	•	•	TF-2	200A	200A-600V	J	10.12	11.75	9.12	15.12	18.12
•	•	•	TF-3	200A	400A-600V	J	14.50	11.75	9.12	15.12	18.12

Freestanding Enclosures

Square D Class 9422 Variable Depth Operators (Circuit Breakers)

Fits Enclosure Height			Square D Type Number	Amp Rating	Frame Type	Space Occupied		When A=72.13	When A=84.13	When A=90.13
72.13	84.13	90.13				L	M	P	P	P
•	•	•	RG-1	75A	GJL	3.53	3.87	10.69	16.69	19.69
•	•	•	RG-1	100A	GJL	3.53	3.87	10.69	16.69	19.69
•	•	•	RN-1	100A	FAL, FHL	5.12	5.38	10.88	16.88	19.88
•	•	•	RP-1	250A	KAL, KHL	7.12	5.75	11.56	17.56	20.56
•	•	•	RR-1	400A	LAL, LHL, Q4L	7.62	8.88	—	13.25	16.25
•	•	•	RT-1	800A	MEL, MXL	9.12	12.00	—	13.12	16.12
•	•	•	RT-1	1000A	MAL, MHL	9.12	12.00	—	13.12	16.12

"K" = 11.88 when "A" = 72.13

"K" = 17.88 when "A" = 84.13

"K" = 20.88 when "A" = 90.13

Charts reference Space Occupied by Disconnect Drawing.

Technical references and DXF downloads available at www.hamfmg.com

All dimensions in inches unless specified otherwise

UHD Heavy Duty Disconnect Enclosures - NEMA 12

ABB Controls, Allen Bradley, Cutler Hammer, General Electric, Siemens I-T-E Max-Flex™, Square D

Disconnect

Freestanding Enclosures

Square D

Square D Class 9422 Disconnect Switches (Cable Mechanism 9422-CFT30 and 9422A-1 Handle Mechanism)

Fits Enclosure Height			Square D Type Number	Amp Rating	Fuse Clip	Fuse Class	Disconnect Height "X"	Disconnect Width "Y"
72.13	84.13	90.13						
•	•	•	TCN-30	30A	No Fuse	—	5.90	6.20
•	•	•	TCF-30	30A	30A-250V	H, K, R	7.50	6.20
•	•	•	TCF-33	30A	30A-600V	H, K, R	10.15	6.20
•	•	•	TCF-33	30A	60A-250V	H, K, R	8.15	6.20
•	•	•	TCF-33	30A	30A-600V	J	7.50	6.20
•	•	•	TDN-60	60A	No Fuse	—	5.90	6.20
•	•	•	TDF-60	60A	30A-600V	H, K, R	10.15	6.20
•	•	•	TDF-60	60A	60A-250V	H, K, R	8.15	6.20
•	•	•	TDF-63	60A	60A-600V	H, K, R	10.65	6.20
•	•	•	TDF-63	60A	60A-600V	J	7.50	6.20
•	•	•	TEN-10	100A	No Fuse	—	5.90	6.20
•	•	•	TEF-10	100A	100A-250V	H, K, R	10.35	6.20
•	•	•	TEF-10	100A	100A-600V	H, K, R	10.35	6.20
•	•	•	TEF-10	100A	100A-600V	J	10.35	6.20

Use switch with appropriate cable mechanism and 9422A-1 handle mechanism

Square D Class 9422 Cable Mechanism (Circuit Breakers)

Fits Enclosure Height			Cable Type Switch	Amp Rating	Fram Type	Circuit Breaker Height "X"	Circuit Breaker Width "Y"
72.13	84.13	90.13					
•	•	•	9422 CGJ30	75A	GJL	4.75	3.50
•	•	•	9422 CEJ30	100A	GJL	4.75	3.50
•	•	•	9422 CFA30	100A	FAL, FHL	6.00	4.50
•	•	•	9422 CKA30	250A	KAL, KHL	8.00	4.50
•	•	•	9422 CLA30	400A	LAL, LHL, Q4L	11.00	6.00

Use cable mechanism with circuit breaker and 9422-A1 handle mechanism

Cable operators are offered in 3', 5', and 10' lengths. Last 2 digits of part numbers above (30) are for 3' cables

Space Occupied By Disconnect Switch

1. Square D Cable System permits circuit breaker locations separate from flange mounted handle mechanism.
2. See National Electrical Code 2005 article 430-10(b) for wiring space (Ref "P") required for line side conductors.
3. Select cable mechanism length based on disconnect location in enclosure. See Square D instructions for minimum cable bend radius.
4. Space occupied by circuit breaker is calculated by:
 - Overall (Height "X" and Width "Y")
 - Minimum wire bend space (manufacturer specified)

"K" = 11.88 when "A" = 72.13

"K" = 17.88 when "A" = 84.13

"K" = 20.88 when "A" = 90.13

Charts reference Space Occupied by Disconnect Drawing.